5D. Thoroughfare Plan

connecting REDMOND

Transportation Master Plan

Figure 5D.1 Redmond streets serve all modes

Contents of this Chapter

This chapter describes Redmond's long-term plan for its street network. Topics discussed include:

- ✓ Motor Vehicle Traffic Trends
- ✓ Pass-through traffic
- ✓ Functional classification system
- ✓ Principal Arterials
- ✓ Minor Arterials
- ✓ Collector Arterials
- ✓ Connectors
- ✓ New connections
- ✓ Implementation

Introduction

This Thoroughfare Plan is Redmond's long-term system plan for its street network. The Build-Out Thoroughfare Plan represents the eventual, permanent street network, including maximum lanes and rights of way.

The Functional Classification standards and lists included in this Thoroughfare Plan provide a guide to the ultimate cross section (lanes) and right-of-way widths for all of Redmond's streets.

Not all of the projects required to complete the Thoroughfare Plan can be funded by 2022 with financial resources expected to be available to the City. Chapter 6, Transportation Facilities Plan (TFP), describes funding forecasts and lists the projects that will be completed by 2022. The TFP will enable the City to meet the service objectives set in Chapter 4, but only through 2022.

This Thoroughfare Plan has been designed to address a number of opportunities, including:

- The Redmond street network could function better for internal access and circulation within the City if there were better connectivity. Because the network is missing key connections, too much reliance is placed on major streets for local circulation and access. This is especially important in Downtown, Overlake and Southeast Redmond.

- Redmond could achieve a multimodal transportation system if its streets were consciously designed for multimodal use. Because the existing street system is so extensive, that task could be overwhelming. However, Redmond can make steady progress on this within this plan period by focusing on a smaller number of key "Multimodal Corridors."

- The Thoroughfare Plan will enable Redmond to simplify its approach to development review as new projects and redevelopments are proposed. Because the City has made this Build-Out Thoroughfare Plan available, planners, landowners, developers and other citizens will have access to unambiguous information about the future street network, including ultimate right of way requirements and future street cross section.

Motor Vehicle Traffic Trends

Redmond's location at the eastern edge of a large, rapidly growing metropolitan region creates two sources of traffic growth: increasing size and density of the City itself, and ongoing regional growth and development. This Thoroughfare Plan reflects analysis of past and future traffic growth trends, which are summarized in the paragraphs below.

However, good street networks are not developed solely in response to traffic demand. Streets represent the most visible and influential infrastructure in the City; their size, appearance and operational characteristics shape everything around them. In addition to traffic demand, this Thoroughfare Plan reflects careful consideration of community character, urban design and quality of life.

Finally, Redmond's streets serve more than automobiles and trucks. The City's street network represents the principal infrastructure for all modes of travel: motor vehicle, public transit, pedestrian and bicycle. Redmond's community vision (see Chapter 2) calls for improving transportation (mode) choices and personal mobility. This will require that the streets function as well for public transit, pedestrians and bicycles as they do for personal motor vehicles and commercial trucks.

This will also require that all three elements of personal mobility – travel, circulation and access – are equally well served by the 2022 and build out street networks.

Traffic Volume and Growth

Traffic in Redmond will continue to grow over the next couple of decades. Figure 5D.2 is based on traffic modeling completed as part of preparing this Thoroughfare Plan. Total daily traffic on Redmond's streets (including the state highway system) will grow by 24% over the next 18 years. Daily vehicle miles of travel will grow by 26%, reflecting an 8% increase in average trip length.

While significant, the annual growth rate of 1.2% represents a slowing in traffic growth which has ranged from 2% to 3% annually over the past couple of decades.

Redmond's traffic growth has mirrored regional rates of traffic growth in the past. The forecasts in this TMP indicate this will continue to be the case as Redmond traffic trends will be similar to overall regional trends.

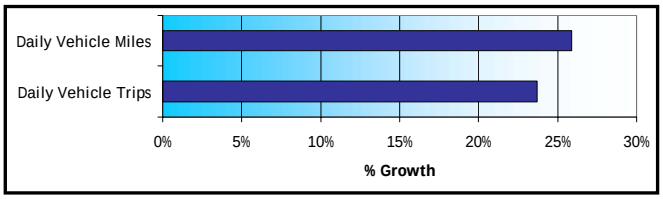

Figure 5D.2 Redmond Traffic Growth 2003 - 2022

This TMP is designed to respond not only to traffic growth but to the other forces of change in Redmond as well. There is time to address mobility needs in a comprehensive, integrated, multimodal manner, without having to embark on an aggressive street widening program.

During the years covered in this TMP, Redmond will emphasize projects designed to improve internal connectivity and multimodal functionality. The City will also continue implementation of the Redmond Intelligent Transportation System (RITS) to ensure that motorists are able to make the best use of available infrastructure.

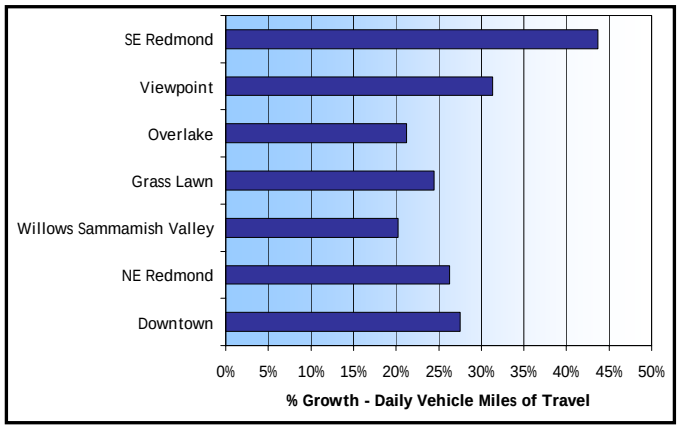

Figure 5D.3 Traffic Growth 2003 – 2022 by TMD

Growing traffic will affect different parts of the roadway network to varying extent, as shown in Figure 5D.3 above and in Figure 5D.4 on the next page. While growth will occur throughout the City, it will be most pronounced in Southeast Redmond. The screenlines used in the map in Figure 5D.4 are the same as those used in Chapter 4 as concurrency management screenlines.

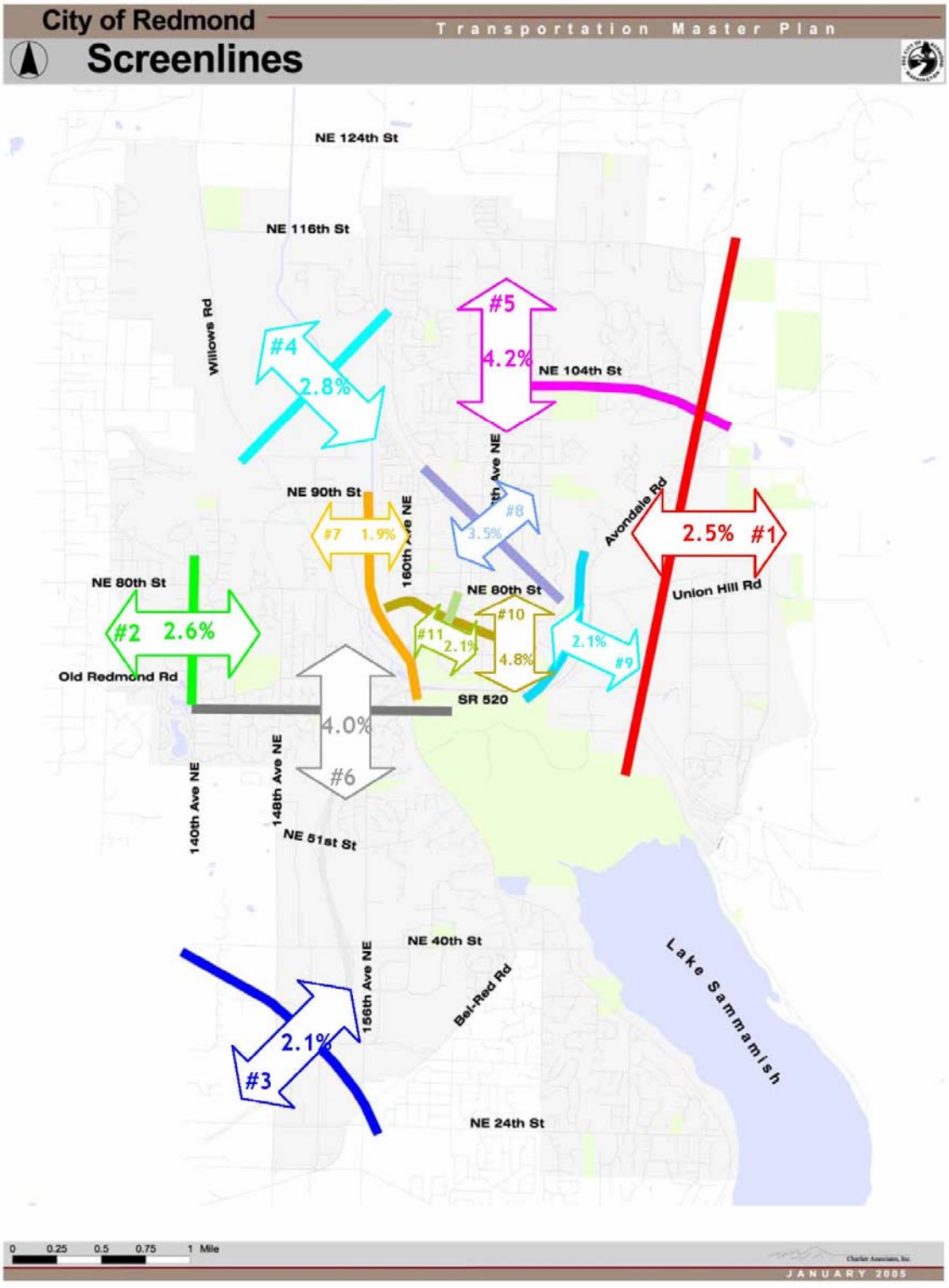

Figure 5D.4 Annual Screenline Growth 2003-2022

Pass-Through Traffic

A study of peak hour traffic in Downtown Redmond was conducted by the City in March 2004. The study tracked and matched license plates at points on the perimeter of Downtown. The study established that 36% to 37% of the traffic observed in the peak hour is "pass-through traffic," meaning it does not stop within the Downtown.

More significantly, almost three-fourths of the pass-through traffic makes no stops within Redmond. This traffic is passing through Downtown from somewhere outside Redmond to somewhere outside Redmond without stopping anywhere in Downtown or in the City.

Pass-through traffic rises in Downtown in the afternoon commute period in part because of eastbound congestion on SR 520 at that time of day. However, pass-through traffic occurs also in part because of Redmond's legacy of radial routes into the surrounding neighborhoods and countryside (Avondale Road, SR 202, etc.). These radial routes converge and bring traffic through the Downtown.

Equally significant, given the radial configuration of the street network, is the fact that nearly two-thirds of peak hour traffic observed in Downtown today either originates or stops in Downtown. These vehicles are carrying downtown employees, customers and residents. By 2020 this will represent most (73%) of the peak hour traffic in Downtown.

Redmond is adopting a balanced approach to addressing the Downtown street network, an approach that involves two parallel strategies. First, the City will work to provide routes for pass-through *travel* that is impacting but not benefiting the Downtown. This includes working with WsDOT to increase capacity of SR 520 so that pass-through traffic does not divert onto local streets unnecessarily. This also includes extending Bear Creek Parkway to handle non-freeway traffic that shows up in Downtown because of the radial the street network.

Second, Redmond will work to improve the functionality of the Downtown street network for internal *circulation* and *access*. This does not require increasing the capacity of downtown street corridors. Rather it includes improving the connectivity of the downtown network by extending 164th Ave NE and 161st Ave NE across the railroad corridor, building the Bear Creek Parkway extension (including the 161st connection) to improve connectivity between Downtown and Town Center, and converting the one-way pair (Redmond Way and Cleveland Avenue) to two-way operation. Other improvements to circulation and access in Downtown include 4-lane to 3-lane conversions to improve multimodal functionality.

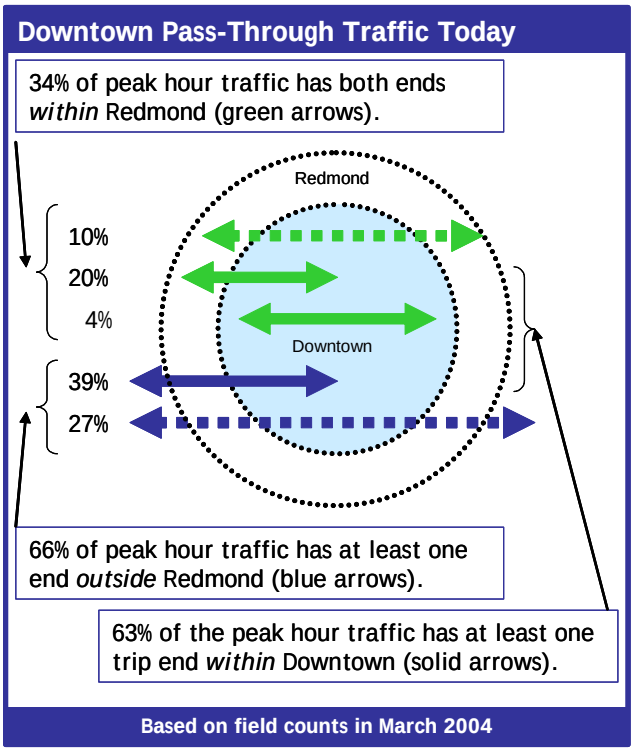

Figure 5D.5 Pass-Through Traffic in Downtown Redmond: 2004

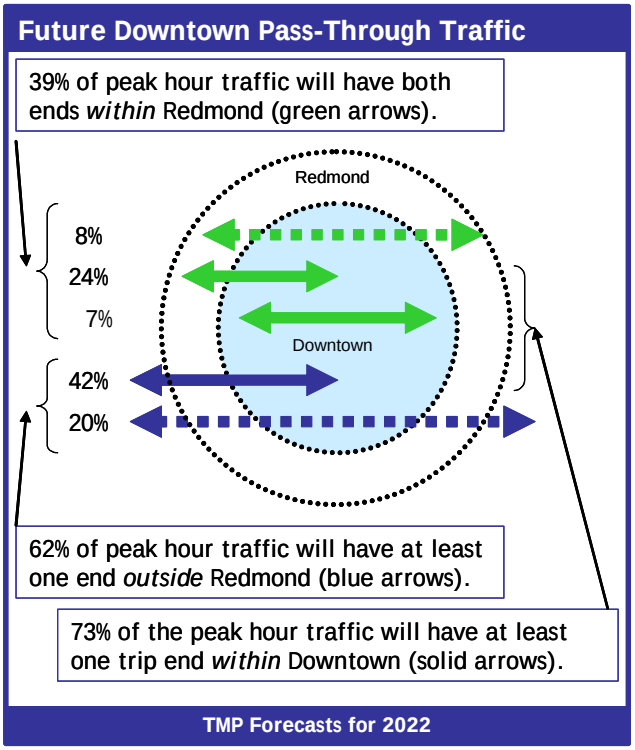

Figure 5D.6 Pass-Through Traffic in Downtown Redmond: 2022

Functional Classification System

Each street in Redmond is one element in the network. This network operates as a system, with traffic flows distributed throughout the various corridors according to a complex interaction of variables, including distance, travel time, time of day, direction, vehicle mix, and so forth. To manage this system effectively, Redmond must consider each street and intersection in terms of its role in the network. The Functional Classification system helps by clarifying the role of each street and by revealing the future size of each segment.

The "function" of a street takes into account the purpose of that corridor in the regional roads and streets grid. Streets may:

- Connect Redmond to other parts of the Puget Sound region;
- Connect local districts and neighborhoods within Redmond; or,
- Provide internal circulation within local districts and neighborhoods.

Functional classification also takes into account the character of each roadway based on abutting land uses, and the role of each roadway corridor in supporting a multimodal system of regional mobility. Finally the functional classification of each roadway determines roadway design and ultimate cross section.

In addition to functional classification, certain roadways occupy corridors that are designated as Multimodal Corridors. These are transportation corridors where:

- Public space within the right of way is allocated to allow safe circulation by all modes (personal motor vehicle, public transit, bicycle, pedestrian);
- The design of facilities within the corridor reflects a balancing of the operating requirements of all modes;
- Conflicts between modes are reduced through design and management practices; and,
- The volume of person trips through the corridor is balanced across the modes.

Designation as a Multimodal Corridor thus activates a special set of design standards intended to facilitate efficient and safe bus, pedestrian and bicycle circulation throughout a regionally-connected, intermodal infrastructure system. Each Multimodal Corridor represents a key element in a grid of facilities that connect major educational, recreational, commercial and employment destinations.

This does not mean that other streets and roadways should not also have provision for public transit, for bicycling or for walking. In fact, the intent of this Transportation Plan is that bicycling and walking will be accommodated throughout the road and street system, and that public transit circulation will be supported on most classifications of roadways.

However, Multimodal Corridors will be subject to a focused, higher-priority investment strategy designed to ensure that a complete grid of multimodal facilities is developed connecting all of the districts in the region. (Multimodal Corridors are mapped in Section 5F.)

Redmond's roadway functional classifications include:

- Freeway
- Principal Arterial
- Minor Arterial
- Collector Arterial
- Connector
- Local Access

Freeway

Freeways serve as high-capacity, high-speed facilities for long trips across and through the Puget Sound region. They also connect the region to the state and the nation. Freeways require massive infrastructure and wide rights of way (up to 300 ft. or more) and are intended to carry heavy volumes of traffic at high speeds with a relatively large percentage of trucks in the traffic stream. They are designed with full control of access. Adjacent land uses may include commercial areas, open space, public lands, industrial sites and certain institutional sites. Residential property will generally not abut Freeways unless separated from the freeway corridor by adequate buffering.

Freeways terminate only at other Freeways or at Principal Arterials. All interconnections with other roadway classifications will be accomplished through grade-separated interchanges. Interchanges will be provided only for other Freeways and for Principal Arterials. There will be no direct access to abutting property.

Freeways will be divided highways with at least two lanes in each direction. Ramps will be provided upstream and downstream of interchanges. Lane width will be at least 12 feet. Inside and outside paved shoulders will be provided. Design geometry will be based on relatively high travel speeds. No at-grade pedestrian crossings will be allowed on Freeways and no bike lanes will be provided adjacent to vehicular travel lanes. In certain instances bicycles may be allowed to utilize paved shoulders or may be accommodated in separate trail facilities within the right of way.

Traffic calming and speed reduction measures are generally not applicable to Freeways. Noise and visual mitigation measures may be appropriate in specific settings. Freeways will be designed with full control of access. No direct at-grade connections will be allowed. Interchanges will be located far enough apart to safely accommodate merging and weaving maneuvers.

Freeways may be designated as Multimodal Corridors for purposes of regional and interregional transit circulation.

Principal Arterial

Principal Arterials provide capacity and continuity for travel between different areas of the region. Adjacent land uses may include residential and commercial areas, open space, public lands, industrial sites and institutional sites. The activity center for a district will often be located along a Principal Arterial or at the intersection of a Principal Arterial with another Principal Arterial or a Collector Arterial.

Principal Arterials terminate only at Freeways or other Principal Arterials. Direct connections with other roadways will be provided via at-grade intersections. Principal Arterials may have as many as four through lanes but will generally be designed as divided facilities with a center median. Turn lanes will be provided as turning movements warrant and may include left turn lanes and right turn lanes, or in five-lane or three-lane configurations may include a two-way continuous left turn lane.

Clearly-marked crosswalks will be provided at all legs of every signalized intersection where warranted. On-street bicycle lanes may be provided even if alternative, close-by, parallel facilities are available. Sidewalks will be included on both sides of the street and will be separated from vehicle lanes by a buffer strip.

Traffic calming and speed reduction measures are generally applicable to Principal Arterials only in areas where sensitive land uses (residential property, schools, public parks and certain other public institutions) directly abut the roadway or are nearby. Principal Arterials will be designed with partial control of access through the City's access management system. On-street parking will be allowed only in commercial areas.

Principal Arterials in Multimodal Corridors shall include provision for transit circulation and access, including bus stops and pull-out bays. Bicycle circulation may be provided via on-street lanes even if there are parallel multi-use paths. Pedestrian facilities in the corridor will be designed to Multimodal Corridor standards.

Minor Arterial

Minor Arterials provide capacity and continuity for travel between different areas of the region, but will not have the regional length and significance of Principal Arterials. Adjacent land uses may include residential and commercial areas, open space, public lands, industrial sites and institutional sites. The activity center for a district will often be served by Minor Arterials and may include the intersections of Minor Arterials with Principal Arterials and Collector Arterials.

Minor Arterials terminate only at Freeways, Principal Arterials or other Minor Arterials. Direct connections with other roadways will be provided via at-grade intersections. Minor Arterials may have as many as four through lanes and may be undivided facilities. Turn lanes will be provided as turning movements warrant and may include left turn lanes and right turn lanes, or in a three-lane configuration may include a two-way continuous left turn lane.

Clearly-marked crosswalks will be provided at all legs of every signalized intersection where warranted. On-street bicycle lanes may be provided even if alternative, close-by, parallel facilities are available. Sidewalks will be included on both sides of the street and will be separated from vehicle lanes by a buffer strip.

Traffic calming and speed reduction measures are generally applicable to Minor Arterials only in areas where sensitive land uses (residential property, schools, public parks and certain other public institutions) directly abut the roadway or are nearby. Minor Arterials will be designed with partial control of access through the City's access management system. On-street parking will be allowed only in commercial areas.

Minor Arterials in Multimodal Corridors shall include provision for transit circulation and access, including bus stops and pull-out bays. Bicycle circulation may be provided via on-street lanes even if there are parallel multi-use paths. Pedestrian facilities in the corridor will be designed to Multimodal Corridor standards.

Collector Arterial

Collector Arterials collect traffic from Connectors and Local streets within a district and deliver that traffic to Principal Arterials. Collectors are generally not intended to serve trans-regional trips and generally will not provide route continuity for more than a mile or two.

These roadways are generally contained entirely within the City and connect the neighborhoods of the City with each other. Adjacent land uses may include residential areas, commercial areas, open space, public lands, industrial sites and institutional sites.

Collectors terminate only at Principal Arterials, Minor Arterials or other Collector Arterials. Direct connections with other roadways will be provided via at-grade intersections. Collector Arterials will have only two through/general purpose lanes and will be undivided facilities. Turn lanes will be provided as turning movements warrant and may include left turn lanes and right turn lanes, or in a three-lane configuration may include a two-way continuous left turn lane.

Clearly-marked crosswalks will be provided at all legs of signalized intersections where warranted and in the vicinity of schools. On-street bicycle lanes may be provided even if alternative, close-by, parallel facilities are available. Sidewalks will be included on both sides of the street and will be separated from vehicle lanes by a buffer strip.

Traffic calming and speed reduction measures are applicable to Collector Arterials, primarily in areas where sensitive land uses (residential property, schools, public parks and certain other public institutions) directly abut the roadway or are nearby. Collector Arterials will be designed with partial control of access through the access management system. On-street parking will be allowed only in commercial areas.

Collector Arterials in Multimodal Corridors shall include provision for transit circulation and access, including bus stops and pull-out bays. Bicycle circulation will be provided via on-street lanes even if there are parallel multi-use paths. Pedestrian facilities in the corridor will be designed to Multimodal Corridor standards.

Connector

Connectors provide for direct vehicle, bicycle and pedestrian connections between adjacent neighborhoods, and between neighborhoods and commercial areas. Connectors do not serve trans-regional trips and provide no route continuity beyond the areas they connect. Adjacent land uses may include residential areas, commercial areas, open space, public lands, industrial sites and institutional sites.

Connectors terminate only at Collector Arterials or Local streets. Direct connections with other roadways will be provided via at-grade intersections. Connectors will have only two through/general purpose lanes. Turn lanes will not be provided unless unusual circumstances warrant, in which case they may include left turn lanes only.

On-street bicycle lanes will not be provided; rather bicycle circulation will be accommodated in mixed traffic in the vehicle lanes. Sidewalks will be included on both sides of the street and will be separated from vehicle lanes by a buffer strip.

Traffic calming and speed reduction measures are applicable to Connectors as warranted by adjacent land uses and traffic characteristics. Connectors will be designed with partial control of access through the access management system. On-street parking will be allowed where adequate roadway width is available.

The City may map and specify future Connector alignments and may require dedication of rights of way for these facilities.

The Multimodal Corridor designation is not applied to Connector Streets.

Local Street

Local streets provide for direct vehicle, bicycle and pedestrian access to commercial and residential land uses. Local streets do not serve trans-regional trips and provide no route continuity beyond the areas they connect. Adjacent land uses may include residential properties, commercial areas, industrial sites and institutional sites.

Local streets may terminate at Principal Arterials, Collectors, Connectors or other Local streets. Direct connections with other roadways will be provided via at-grade intersections.

Local streets will have only two through/general purpose lanes. Left turn lanes may be provided only in unusual circumstances. Clearly-marked crosswalks will be provided at signalized intersections or at other locations where warranted because of the proximity of schools or significant pedestrian activity.

On-street bicycle lanes will not be provided; rather bicycle circulation will be accommodated in mixed traffic in the vehicle lanes. Sidewalks will be included on both sides of the street and will be separated from vehicle lanes by an appropriate buffer strip. Traffic calming and speed reduction measures are applicable to Local streets as warranted by adjacent land uses and traffic characteristics.

Local streets will be designed with partial control of access through the access management system. On-street parking will be allowed where adequate roadway width is available.

The Multimodal Corridor designation is not applied to Local Streets.

Street Design Standards

One of the advantages of a Thoroughfare Plan is the opportunity it provides to specify the maximum number of general-purpose lanes and maximum right of way needed for any street in the network. This will enable the City, through its development review function, to achieve locally-appropriate urban design without the need to require the dedication of unnecessary right of way because of uncertainty about future street widths.

The City seeks to keep streets as narrow as possible, given the intended function of each street. It is also important to avoid the inexorable widening of streets as has occurred in other cities. At the same time Redmond intends to ensure that all modes are adequately accommodated within city street corridors.

The widths and cross sections shown in Figure 5D.7 are "maximum" dimensions. In some cases, due to right-of-way constraints or existing abutting land uses, streets may be narrower than other streets in the same functional classification. For this reason, the table provides maximum dimensions for 4-lane facilities and for 2-lane facilities (referring to general purpose lanes). The 4-lane standards are designated with a (4) and the 2-lane standards are designated with a (2), down through Collector Arterial. Below that (Connector and Local), the basic standard calls for a 2-lane maximum (general purpose lanes).

The City will update its street design standards to reflect the Functional Classification provisions of this TMP. This Update is shown in Chapter 9 as a high-priority action item to be initiated within the first three years following TMP adoption.

Classification	Maximum General Purpose Lanes	Maximum Mid-block Curb-to-Curb Width	Maximum Mid-block Right of Way	Maximum Intersection Right of Way
Principal Arterial (4)	**4**	**71'**	**97'**	**133'**
Principal Arterial (2)	**2**	**47'**	**73'**	**97'**
Minor Arterial (4)	**4**	**85'**	**111'**	**135'**
Minor Arterial (2)	**2**	**61'**	**87'**	**99'**
Collector Arterial (4)	**4**	**85'**	**111'**	**135'**
Collector Arterial (2)	**2**	**61'**	**87'**	**99'**
Connector Street	**2**	**41'**	**67'**	**79'**
Local Street	**2**	**41'**	**67'**	**67'**

Figure 5D.7 Build-Out Maximum Right of Way

Functional Classification of Redmond Streets

The functional classification, future lanes and rights of way for all streets in the Thoroughfare Plan are provided in Figures 5D.8 – Figure 5D.10 below and on the next several pages.

The tables are designed so that actual paved lane widths can vary as appropriate within the standards. For example, general purpose lanes could vary from 10' to 12' in width, depending on right of way availability and other design considerations.

Principal Arterials

Principal Arterial Streets	General Purpose Lanes		Multimodal Corridors
	Widest Existing	Future	
Avondale Rd. NE	4	4	✓
Redmond Way (East City Limits to Bear Creek Parkway, east)	4	4	✓
Bear Creek Parkway	3	4	
Bear Creek Parkway, west (exten)- Leary Way to Redmond Way	0	4	✓
Redmond Way (148th Ave NE to Bear Creek Parkway, west)	4	4	✓
Redmond Way (West City Limits to 148th Ave NE)	4	4	
Redmond-Woodinville Road - NE 116th St - NE 124th St	2	2	
Redmond-Woodinville Road - NE 90th St - NE 116th St	2	2	✓
W Lk Sammamish Pkwy NE-Bel-Red Rd to NE 51st St	2	4	✓
W Lk Sammamish Pkwy NE- 51st St to BNSF RR Bridge	4	4	✓
NE 24th St - 148th to 156th Ave NE	4	4	✓
NE 90th St - Willows Rd to 154th Ave NE	2	2	✓
NE 90th St - 154th Ave NE to 160th Ave NE	4	4	✓
NE 90th St - 160th Ave NE to Red-Wood Rd	2	2	✓
124th Ave NE - Willows Rd to Avondale Rd	2	2	
148th Ave NE - NE 20th St to Willows Rd	4	4	✓
154th Ave NE - BNSF RR Bridge to NE 85th St	4	4	
154th Ave NE - NE 85th St to NE 90th St	2	2	

Figure 5D.8 Principal Arterial Streets

Minor Arterials

Minor Arterial Streets	General Purpose Lanes		Multimodal Corridors
	Widest Existing	Future	
Redmond-Woodinville Road/164th Ave NE - south of NE 90th St	4	2	
Redmond Way (159th Pl NE to 170th Ave NE)	3	2	✓
Avondale Way NE	4	4	✓
164th Ave NE (76th Ave NE to Cleveland Street)	0	2	✓
Bel - Red Rd	4	4	
E Lk Sammamish Pky NE	2	2	
Leary Way NE	4	4	✓
NE Union Hill Rd (188th Ave. NE to Avondale Way)	4	4	✓
NE Union Hill Rd (East City Limits to 188th Ave. NE)	2	4	
Novelty Hill Rd	2	4	
Old Redmond Rd	2	2	✓
W Lk Sammamish Pkwy NE (Bel-Red Rd to South City Limits)	2	2	✓
Willows Rd	3	4	
NE 24th St - City limits to W Lk Sammamish Pkwy NE	2	2	✓
NE 40th St	4	4	✓
NE 51st St (156th Ave NE to 148th Ave NE)	4	4	✓
NE 51st St (W. Lake Sammamish to 156th Ave NE)	2	2	
NE 80th St - Leary Way to 164th Ave NE	2	2	
NE 85th St	4	2	
140th Ave NE	2	2	
156th Ave NE (NE 20th to NE 51st St)	4	4	✓
170th Pl/Ave NE (Redmond Way to Avondale Way)	2	4	
188th Ave NE - between Union Hill Rd & Redmond-Fall City Rd	2	2	✓

Figure 5D.9 Minor Arterial Streets

Collector Arterials

Collector Arterial Streets	General Purpose Lanes		Multimodal Corridors
	Widest Existing	Future	
Cleveland Avenue	3	2	
NE 20th St	4	4	
NE 76th St (Redmond Way to 192nd Ave NE)	2	2	
NE 80th St (132nd to 140th Ave NE)	2	2	
NE 80th St (164th Ave NE to 171st Ave NE)	2	2	
NE 83rd St (158th Ave NE to 166th Ave NE)	2	2	
NE 100th St (166th Ave NE to 171st Ave NE)	2	2	
NE 104th St/NE 109th St	2	2	
NE 116th St	2	2	✓
152nd Ave NE (NE 20th St to NE 31st St)	4	2	✓
31st/36th St NE (148th Ave NE to 156th Ave NE) (incl. SR 520 bridge)	2	2	✓
150th Ave NE (NE 36th St to 51st St NE)	2	2	
154th Pl NE (Red-Wood Rd to NE 116th St)	2	2	
156th Ave NE - NE 51st St to NE 65th St	2	2	✓
159th Pl NE (Bear Creek Parkway to Leary Way)	2	2	
160th Ave NE (Redmond Way to NE 90th St)	2	2	
161st Ave NE - NE 90th to Redmond Way	2	2	✓
161st Ave NE (Bear Creek Pkwy (exten) to Redmond Way)	0	2	✓
166th Ave NE (NE 76th St to NE 85th St)	2	2	✓
166th Ave NE (NE 85th St to NE 104th St)	4	2	✓
166th Ave NE (104th St NE to 111th St NE)	2	2	✓
169th Ave NE (NE 79th St to NE 80th St)	2	2	
171st Ave NE (NE 80th St to NE 100th St)	2	2	
172nd Ave NE (West Lake Sammamish Pkwy to NE 30th St)	2	2	
178th Ave NE/180th Ave NE	2	2	
185th Ave NE - Union Hill Rd to SR-202 (Redmond-Fall City Rd)	2	2	

Figure 5D.10 Collector Arterial Streets

Connectors

Connector Streets	General Purpose Lanes		Multimodal Corridors
	Widest Existing	Future	
NE 65th St (185th Ave NE to 188th Ave NE)	0	2	
NE 73rd St (185th Ave NE to 188th Ave NE)	0	2	
NE 76th St (Leary Way to Bear Creek Parkway)	2	2	
NE 80th St (185th Ave NE to 188th Ave NE)	0	2	
158th Ave NE (NE 85th St to NE 83rd St)	2	2	
158th Ave NE (NE 83rd St to Redmond Way)	0	2	
172nd Ave NE (NE 116th St to NE 128th St)	2	2	
192nd Ave NE (Union Hill Rd to SR-202)	0	2	

Figure 5.11 Connector Streets

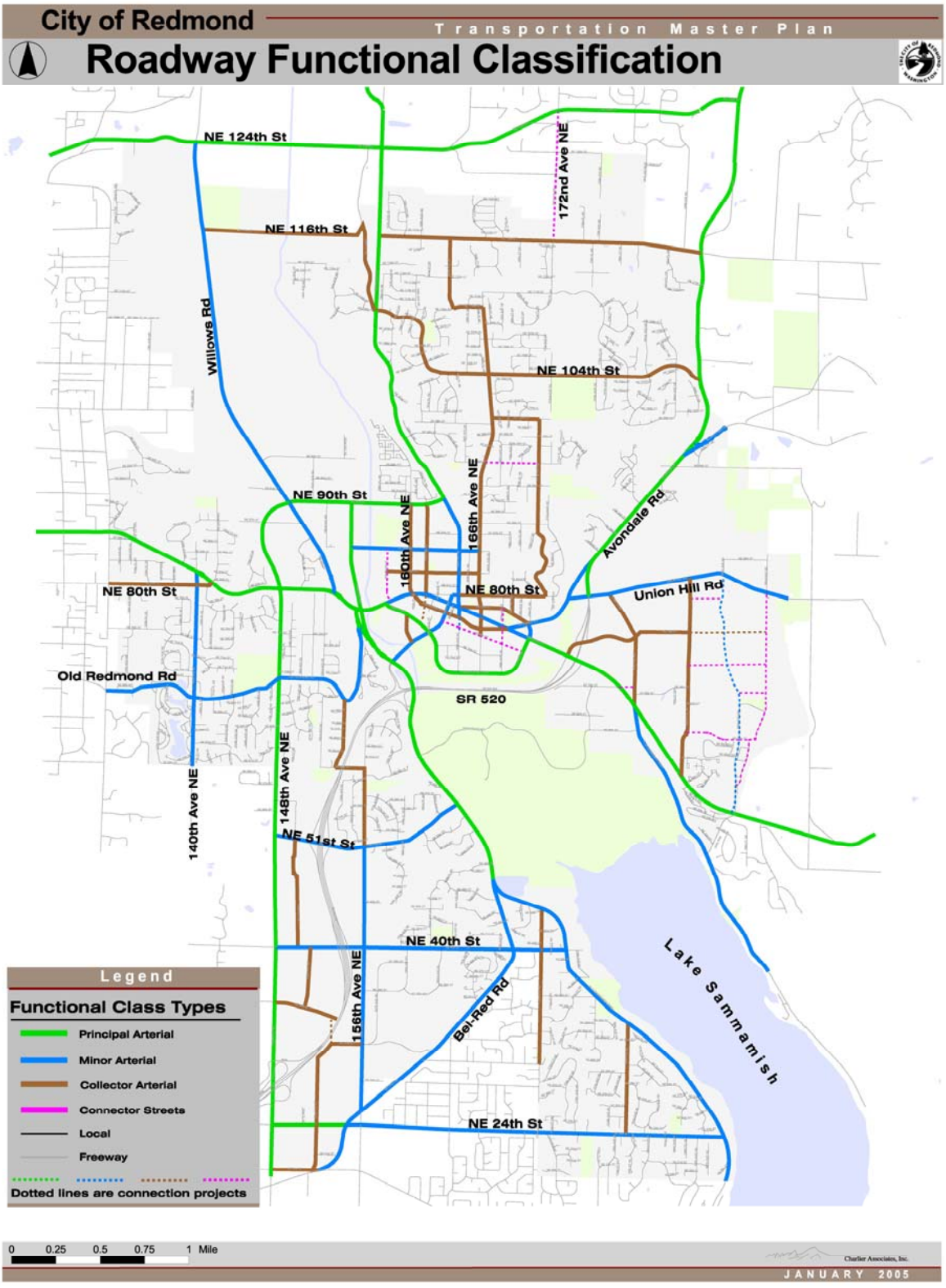

Figure 5D.12 Functional Classification Map

New Street Connections and Corridors

Improving connectivity represents one of the primary opportunities for enhancing mobility in Redmond. The City's streets today represent an incomplete grid, with missing links at key points in the network. Making these connections will reduce out-of-distance travel and improve system efficiency. To the extent that connectivity can be improved, circulation and access will be enhanced, with direct benefits to economic viability and neighborhood livability.

However, only limited opportunities for improved connectivity remain in Redmond, due to the fact that the City is largely built-out. The new connections in this Plan and the concepts for each of the resulting roadways are as follows:

1. Extension of 164th Ave NE across the railroad corridor in Downtown. This is a Principal Arterial with two through/general purpose lanes and turn lanes as warranted. This will be a Multimodal Corridor. The extension section will feature a design and cross section appropriate to provide continuity with the section of 164th just north of this, which is programmed for a four-lane to three-lane conversion project.

2. Extension of Bear Creek Parkway from Leary Way to Redmond Way. This is a Minor Arterial. Initially it will be built with two through/general purpose lanes and turn lanes as warranted. Right of way will be established for an ultimate five-lane cross section. This is a Multimodal Corridor from Leary Way to the extension of 161st Ave NE.

3. Extension of 161st Ave NE across the railroad corridor in connection with the Bear Creek Parkway Extension. This is a Collector Arterial with two through/general purpose lanes and turn lanes as warranted. This is a Multimodal Corridor.

4. Extension of 172nd Ave NE from NE 122nd St to NE 124th St. This is a Connector street with a cross section limited to two lanes, except at the intersections with 124th and 116th, where turn lanes may be provided.

5. Extension of Willows Road from 124th St to NE 145th St. The Willows corridor will be a Minor Arterial and will travel along the edge of a sensitive rural landscape designated for agricultural use. The concept for this corridor is a two-lane roadway with limited right of way and infrequent property access. Horizontal and vertical alignments will be designed to minimize landscape impacts. The purpose of this project is to provide better connections between Redmond and Woodinville, and the two City's tourist districts. This project is also intended to eliminate the need to widen the Red-Wood Road Corridor between Redmond and Woodinville from a two-lane to a four-lane roadway. This extension lies outside the City of Redmond, and thus represents a regional/intergovernmental project

Of the new connections listed, all but the Willows Road extension are included in the funded 2022 Thoroughfare Plan.

In addition to this list, future corridor(s) will be needed in the Union Hill/Novelty Hill area to complete a poorly-connected grid in that developing area. The City will undertake an analysis of overall connection needs between planned growth east of Redmond and the SR 520 Freeway. The analysis will include the area bounded on the north by NE 133rd St., on the south by SR 202, and on the west by Avondale Way. On the east the study will extend as far into rural King County as necessary to provide a thorough evaluation.

Also, additional connections in the Overlake commercial core may be needed to facilitate redevelopment and infill in this mixed use district. The City will address this need as part of the Overlake Plan.

In each of these cases, future area and neighborhood studies by the City will determine what specific additional connections are to be made. A map of the key new connections is provided in Figure 5D.12 below.

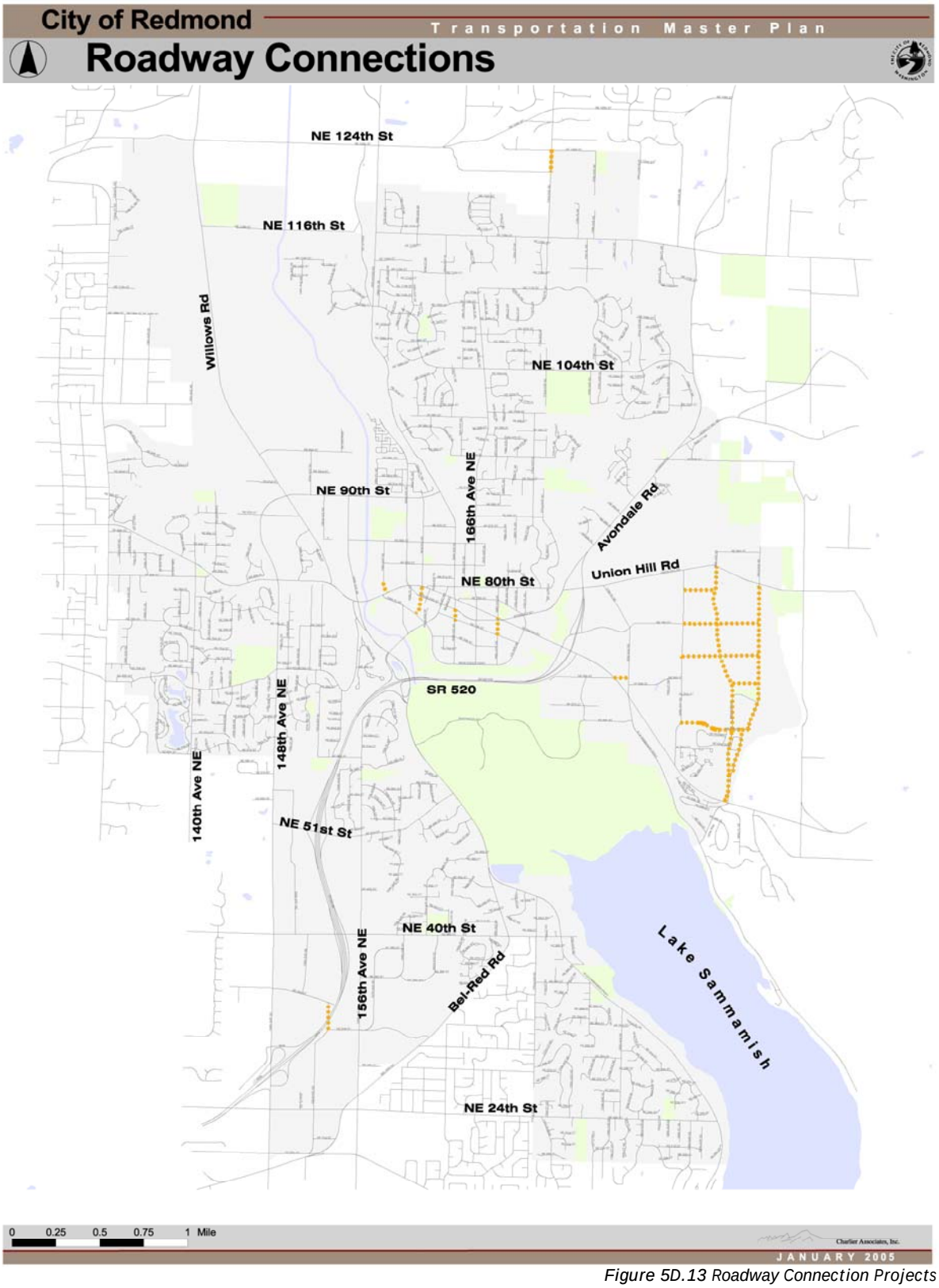

Figure 5D.13 Roadway Connection Projects

Implementation

Achieving the Thoroughfare Plan will require a number of supportive activities by the City. These include:

1. The City will update its street design standards to incorporate the policies and programs contained in this Transportation Master Plan.
   - a. The standards will implement the new cross section and maximum right of way provisions of the Thoroughfare Plan.
   - b. The standards will implement the intersection design, cross section and multimodal accommodation requirements of Chapter 5(e) for Multimodal Corridors.

2. The City will undertake an evaluation of its maintenance practices and programs to define "adequate maintenance" in measurable terms.
   - a. The evaluation will define adequate "adequate maintenance" for each mode in measurable terms.
   - b. The evaluation will be based on a "sustainability" approach that minimizes life cycle costs, ensures adequate functionality, and is consistent with public expectations.
   - c. The evaluation will estimate program requirements for achieving "adequate maintenance" including annual, recurring costs.

3. The City will develop a targeted Traffic Safety Program designed to identify and eliminate hazardous intersections and locations.
   - a. Make pedestrian improvements to areas The Traffic Safety Program will utilize data from the ongoing accident data system.
   - b. An annual prioritization of the highest accident rate locations in the City will be published as part of the Mobility Report Card and evaluated to determine whether modest cost improvements would have the potential to reduce the accident rate at each location.
   - c. The City will create a "Safety Program" within its Transportation Facilities Plan equal to $500,000 annually to be used to make improvements identified under b above.

4. The City will undertake an analysis of overall connection needs between planned growth east of Redmond and the SR 520 Freeway.
   - a. The analysis will include the area bounded on the north by NE 133rd St., on the south by SR 202, and on the west by Avondale Way. On the east the study will extend as far into rural King County as necessary to provide a thorough evaluation.
   - b. The study will consider future growth patterns and will identify future roadway connections or existing roadways to serve this growth, implementing the functional classification provisions of Chapter 5 (including the Connector Street classification), and taking into account access needs associated with future high capacity transit station locations.

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